

ABSTRACT

A method of producing a magnetic garnet single
5 crystal film formation substrate 2 for growing a magnetic
garnet single crystal film by liquid phase epitaxial
growth is provided. First, a base substrate 10 composed
of a garnet-based single crystal being unstable with a
flux used for the liquid phase epitaxial growth is formed.
10 Next, a buffer layer 11 composed of a garnet-based single
crystal thin film formed at least on a crystal growing
surface of said base substrate 10 and being stable with
the flux is formed. When forming the buffer layer 11 on
the base substrate 10, it is formed by a thin film
15 formation method, such as sputtering, without heating the
substrate 10 in a positive manner.